

**Amendments to the Specification:**

Please replace the paragraph starting on page 4, line 17 with the following amended paragraph:

Referring also to FIG. 4, it is noted that the effect of the impacting deposition flux of  $\text{SiO}_x$  is to form the distal end 20 of the column 17 of  $\text{SiO}_x$ , with a surface 22a, 22b, 22c that grows towards an oblique angle  $\beta$  (FIG. 3) with respect to the surface of the substrate 14b. It is first noted that the directors are substantially flat and aligned substantial parallel to the surface of the  $\text{SiO}_x$  columns 17. It is next noted that the near director field (indicated by numerical designation 24a) is parallel to the directors 19. Thus, the near director field 24a is parallel to the longitudinal axis 21 of the column 17 in the region more proximate the surface of the substrate 14b; however, the far director field (indicated in FIG. 3 by numerical designation 24b) tends to deviate in angular direction towards surface 22 at the distal end of the column 17. Thus, the effective tilt angle of the cell is the angle  $\gamma$ . Typically, the effective director tilt angle  $\gamma$  is relatively high, e.g., in the order of 20 degrees, thereby reducing the dynamic range of the cell. It should be noted that the angle of the longitudinal axis 21 relative to the surface of the substrate, i.e., the angle  $\alpha$ , is limited by the kinetics of the growing process used to form the columns and not by the angle between the deposition flux and the normal 18 to the surface of the substrate (FIG. 2)

Please replace the paragraph starting on page 8, line 27 with the following amended paragraph:

An important consideration is that the column tilt angle (relative to the substrate normal) obtained by oblique evaporation is typically less than the deposition flux angle. Several models have been presented to explain the difference between the incident beam and column angles, but the most credible is the conservation of parallel momentum mentioned briefly above. In this model, the parallel momentum of depositing species results in a preferred surface diffusion of atoms in a direction parallel to the sample surface and within the plane of incidence. This preferred surface diffusion causes the columns to tilt away from the vapor beam towards the substrate normal, as shown in FIG. 4. Based on this model, the alignment layer was designed to

use an ion beam assist during oblique evaporation to transfer an opposing parallel momentum to depositing atoms, as shown in FIG. 7. Due to the orientation of the ion gun, the momentum transferred by the ion beam is in the opposite direction as the deposition parallel momentum, which minimizes (or reverses) the effect. Atoms are given a preferential surface diffusion in the opposite direction which leads to: (a) a reduction in column angle,  $\alpha'$  (FIG. 6) as compared to  $\alpha$  (FIG. 3); (b) densification of the deposited column 17', and (c) and planarization of the surface, i.e., planarization of the distal ends 20' of the columns 17; (FIGS. 6 and 7). At higher ion beam energies, surface sputtering occurs which assists in planarizing the sample surface.